

Sony International (Europe) GmbH  
PAE99-114TRDE  
Our File: P23504EP

5

Claims

1. Communication device (1) for transmitting and receiving data in a communication system, in which a random access channel is provided, said random access channel providing a plurality of access resources being divided in at least two access resource groups, each access resource group corresponding to a different access service class with a respective access probability, comprising  
10 selecting means (5) for randomly selecting an access resource from an access resource group corresponding to the current access service class of the communication device, transmitting means (3) for transmitting a random access burst in said selected access  
15 resource, and  
detecting means (6) for detecting a specific event, whereby said current access service class of the communication device is changed into another access service class when said specific event is detected by said detecting means (6).
- 20 2. Communication device (1) according to claim 1,  
**characterized in,**  
that the access resources of the access resource group corresponding to the random access class having the highest random access probability are exclusively allocated to this access resource group.  
25
3. Communication device (1) according to claim 1 or 2,  
**characterized in,**  
that the access resources of each access resource group are exclusively allocated to their respective access resource group.  
30
4. Communication device (1) according to claim 1 or 2,  
**characterized in,**  
that some access resources are allocated to two or more access resource groups.
- 35 5. Communication device (1) according to one of the claims 1 to 4,  
**characterized in,**  
that rules according to which said current access service class is changed into another access service class are stored in a memory means (7).
- 40 6. Communication device (1) according to claim 5,

**characterized in**

being a mobile station of a wireless telecommunication system, whereby said memory means (7) is part of a subscriber identity module.

- 5     7. Communication device (1) according to one of the claims 1 to 6,  
**characterized in,**  
that rules according to which said current access service class is changed into another access service class are received from another communication device.
- 10    8. Communication device (1) according to one of the claims 1 to 7,  
**characterized in,**  
that said specific event is the reception of a predetermined number of negative acknowledgment signals from another communication device after sending random access requests on said random access channel.
- 15     9. Communication device (1) according to one of the claims 1 to 7,  
**characterized in,**  
that said specific event is a time point.
- 20     10. Communication device (10) according to one of the claims 1 to 9,  
**characterized in,**  
that said current access service class is changed periodically.
- 25     11. Communication device (1) according to one of the claims 1 to 10,  
**characterized in,**  
that said communication system is a wireless UMTS telecommunication system, whereby said access resources of said random access channel are defined by time slots and signature codes.
- 30     12. Communication method for a communication device (1) of a communication system, in which a random access channel is provided, said random access channel providing a plurality of access resources being divided in at least two access resource groups, each access resource group corresponding to a different access service class with a respective access probability, comprising the steps of
- 35     randomly selecting an access resource from an access resource group corresponding to the current access service class of the communication device,  
transmitting a random access burst in said selected access resource, and

detecting a specific event, whereby said current access service class of the communication device is changed into another access service class when said specific event is detected.

- 5      13. Communication method according to claim 12,  
**characterized in,**

that the random access resources of the access resource group corresponding to the random access class having the highest random access probability are exclusively allocated to this access resource group.

10

14. Communication device according to claim 12 or 13,  
**characterized in,**

that the random access resources of each access resource group are exclusively allocated to their respective access resource group.

15

15. Communication method according to claim 12 or 13,  
**characterized in,**

that some random access resources are allocated to two or more access resource groups.

- 20      16. Communication method according to one of the claims 12 to 15,  
**characterized in,**

that rules according to which said current access service class is changed into another access service class are stored in and read from a memory means (7).

- 25      17. Communication method according to one of the claims 12 or 16,  
**characterized in,**

that rules according to which said current access service class is changed into another access service class are transmitted from another communication device of the communication system.

30

18. Communication method according to one of the claims 12 to 17,  
**characterized in,**

that said specific event is the reception of a predetermined number of negative acknowledgment signals from another communication device after sending random access requests on said random access channel.

35

19. Communication method according to one of the claims 12 to 17,  
**characterized in,**

that said specific event is a time point.

20. Communication method according to claim 19,  
**characterized in,**  
that said current access service class is changed periodically.

5

21. Communication device according to one of the claims 12 to 20,  
**characterized in,**  
that said communication system is a wireless UMTS telecommunication system,  
whereby said access resources of said random access channel are defined by time slots  
10 and signature codes.

P  
O  
S  
T  
A  
L  
E  
S  
P  
R  
I  
N  
T  
E  
D  
I  
N  
U  
S  
A  
P  
O  
S  
T  
A  
L  
E  
S  
P  
R  
I  
N  
T  
E  
D  
I  
N  
U  
S  
A